PLASMA-ENHANCED FUNCTIONALIZATION OF CARBON-CONTAINING SUBSTRATES

ABSTRACT

Methods for producing plasma-treated, functionalized carbon-containing surfaces are provided. The methods include the steps of subjecting a carbon-containing substrate to a plasma to create surface active sites on the surface of the substrate and reacting the surface active sites with stable spacer molecules in the absence of plasma. Biomolecules may be immobilized on the resulting functionalized surfaces. The methods may be used to treat a variety of carbon-containing substrates, including polymeric surfaces, diamond-like carbon films and carbon nanotubes and nanoparticles.